IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Michael Knoblauch, et al.
Serial No:	10/605,104
Filing Date:	9/9/2003
Title:	Forisomes, Method for Their Isolation, and Treir Use as a Molecular Working Machine
Examiner:	Marsha M. Tsay
Art Unit:	1656

Commissioner for Patents
Alexandria, VA 22313-1450

DECLARATION PURSUANT TO 37 CFR 1.132

I, Prof. Dr. Dirk Prüfer, Machabaerstr. 57, Cologne, Germany, am one of the co-inventors of the instant application. I received my PhD degree ("Dr.") in 1992 at the University of Cologne and was Head of the Department "Functional and Applied Genomics" and Head of the Section "Molecular Biology" at the assignee, Fraunhofer-Gesellschaft, at the Fraunhofer Institute for Molecular Biology and Applied Ecology in Aachen and Schmallenberg, Germany, between 1999 and 2004. As from December 2004, I am Full Professor for Molecular Biotechnology of Plants at the Institute for Biochemistry and Biotechnology of Plants at Münster University, as well as Head of Department "Functional and Applied Genomics" at the above Fraunhofer Institute.

The main field of my scientific research is directed to forisomes since 2000.

The amino acid sequence SEQ ID NO:2 as described in our above mentioned application is a sequence which occurs highly conservated in all P1 proteins. These proteins are responsible for the mechanical behavior ("stopcock") of the forisomes in fabaceae. In order to demonstrate that SEQ ID NO:2 occurs in and therefore is an inherent feature of all P1 proteins, i.e. that it can be assigned to the P1 protein only, the amino acid sequence of five P1 proteins, derived from four different fabaceae plants, is listed on the attached sheet. As examples, EGFDIAFK = Glu-Gly-Phe-Asp-Ile-Ala-Phe-Lys is found in line 11 of each of the sequences; these five sequences are publicly accessible via the US NCBI gene database:

MtP1.1 = 1. Variant of Medicago trunculata = MtSEO-F1

http://www.ncbi.nlm.nih.gov/protein/ABV32455.1

MtP1.2 = 2. Variant of Medicago trunculata = MtSEO-F4

http://www.ncbi.nlm.nih.gov/protein/ADN32805.1

GmP1 = Glycine max. = GmSEO-F4

http://www.ncbi.nlm.nih.gov/protein/ADN32792.1

VfP1 = Vicia faba = Vffor1

http://www.ncbi.nlm.nih.gov/protein/ABV32453.1

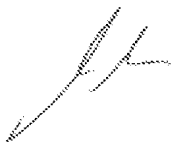
CgP1 = Canavalia gladiata = Cgfor1

http://www.ncbi.nlm.nih.gov/protein/ABV32453.1

About the forisomes of Medicago trunculata, I have reported with co-authors in G.A.Noll et al., Plant Mol Biol (2007), 65:285-294 (copy attached). The provisional name of the protein as used in our patent application ("P1") had been corrected therein to be in line with systematic designations used in this field; however, since the term "for" was already occupied, it was later amended into "SEO" ("Sieve Element Occlusion"), see the paper e.g. B. Müller et al. in Appl. Microbiol. Biotechnol. (2010) 88:689-698 (copy attached), where we report on the possibility to obtain recombinant artificial forisomes from expression of MtSEO1 and MtSEO4 in plants and yeast.

I herewith declare that all statements made of my own knowledge are true and that all statements made on information and belief are believed to be true; and that I am warned that willful false statements and the like are punishable by fine or imprisonment, or both (18 U.S.C. 1001) and may jeopardize the validity of the application or any patent issuing thereon.

Signed this ____4.__ day of October 2010



_____

(signature)

DIRK PRÜFER

(printed name)


MtPl.1
MtPl.2
CgPl
VfPl
GmPl
SEQ NO:2